**Homework 40 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Use Algebraic Explanations to Provide an Argument Period:\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Failure to show all work and write in complete sentences will result in LaSalle!**

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| 1) Complete the logical argument by giving a reason for each step.    a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | 2) Solve the equation. Write a reason for each step.  -12x = 28 – 16x *(format like this)*  Equation Reason: |
| 3) Solve the equation. Write a reason for each step.  7(x – 11) = 12x – 122 | 4) Solve for r. Write a reason for each step.  S = 4(2r + 5) | |
| 5) Solve for r. Write a reason for each step.  s = 7r – 33 | 6) Solve for r. Write a reason for each step.  s = 8(2r – 5) | |

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| 1. The circumference of a certain circle is 10π inches. What is the area of that circle, in terms of π? | 1. Factor x2 + 2x – 15 |
| 1. What is the sum of the solutions t the quadratic equation 9x2 – 64 = 0 | 1. X = {- 5, 3} is the solution set for what quadratic equation? |
| 1. Simplify | 1. Last year, Naomi’s garden was 5 foot by 8 foot rectangular plot. He wants to produce more food this year, so she plans to triple the area of her garden. According to Naomi’s plan, what will be area of her new garden? |
| 1. The figure below is a hexagon, and ABCD is a rectangle that is contained in that hexagon. All measurements on the figure below are in centimeters. What is the area of the entire hexagon?   A 5 B  4 4  6 4 4 6    4 C 5 D 4 | 1. In the figure below, all angles are right angles. Find the area of the shaded region.   28 in    24 in  12 in 12 in    24 in    20 in      16 in 16 in  28 in |